

Claims

- [c1] What is claimed is:
1. A method for determining the re-establishment of a Radio Link Control (RLC) entity in a wireless communications device undergoing a Serving Radio Network Subsystem (SRNS) relocation procedure with a Universal Terrestrial Radio Access Network (UTRAN), the wireless communications device supporting a Radio Resource Control (RRC) layer having a plurality of states that include:
 - a CELL_PCH state in which no uplink communications is possible with the UTRAN, and in which the position of the wireless device is known on a cell level;
 - and
 - a URA_PCH state in which no uplink communications is possible with the UTRAN, and in which the position of the wireless device is known on a UTRAN Registration Area (URA) level;the method comprising:
 - receiving, by the RRC layer, a reconfiguration procedure from the UTRAN that initiates a SRNS relocation procedure for the wireless device;
 - transmitting, from the wireless device, confirmation information to the UTRAN in response to the reconfiguration procedure;
 - receiving, by the RRC layer, acknowledgement that the UTRAN successfully received the confirmation information; and
 - in response to the acknowledgement, transitioning, at the RRC layer, into the CELL_PCH state or the URA_PCH state, and re-establishing, by the RRC layer, an RLC entity supported by the wireless device to effect the SRNS relocation procedure.
 - [c2] 2. The method of claim 1 further comprising:
 - generating, by the wireless device, a START value corresponding to the RLC entity, the RLC entity maintaining a hyperframe number;
 - including the START value in the confirmation message; and
 - in response to the acknowledgement, assigning, by the wireless device, the START value to the most significant bits of the hyperframe number.
 - [c3] 3. The method of claim 1 wherein the RLC entity is re-established before the RRC layer transitions into the CELL_PCH state or the URA_PCH state.

- [c4] 4. The method of claim 1 wherein the RLC entity is re-established after the RRC layer transitions into the CELL_PCH state or the URA_PCH state.
- [c5] 5. A wireless device comprising a central processing unit (CPU) in electrical communications with a memory, the memory comprising program code for implementing the method of claim 1.
- [c6] 6. A method for determining the re-establishment of a Radio Link Control (RLC) entity in a wireless communications device undergoing a Serving Radio Network Subsystem (SRNS) relocation procedure with a Universal Terrestrial Radio Access Network (UTRAN), the wireless communications device supporting a Radio Resource Control (RRC) layer having:
- a CELL_DCH state in which the wireless device is allocated a dedicated channel for uplink communications with the UTRAN;
 - a CELL_FACH state in which no dedicated channel is provided for uplink communications with the UTRAN;
 - a CELL_PCH state in which no uplink communications is possible with the UTRAN, and in which the position of the wireless device is known on a cell level;
 - and
 - a URA_PCH state in which no uplink communications is possible with the UTRAN, and in which the position of the wireless device is known on a UTRAN Registration Area (URA) level;
- the method comprising:
- receiving, by the RRC layer, a reconfiguration procedure from the UTRAN that initiates a SRNS relocation procedure for the wireless device;
 - transmitting, from the wireless device, confirmation information to the UTRAN in response to the reconfiguration procedure;
 - receiving, by the RRC layer, acknowledgement that the UTRAN successfully received the confirmation information;
 - in response to the acknowledgement, transitioning, at the RRC layer, into the CELL_PCH state or the URA_PCH state; and
 - subsequent to transitioning into the CELL_PCH state or the URA_PCH state, transitioning, at the RRC layer, to the CELL_DCH state or the CELL_FACH state, and re-establishing a RLC entity supported by the wireless device to effect the

SRNS relocation procedure in response to the acknowledgement.

- [c7] 7. The method of claim 6 further comprising:
generating, at the wireless device, a START value corresponding to the RLC entity, the RLC entity maintaining a hyperframe number;
including the START value in the confirmation message; and
in response to the acknowledgement, assigning, by the wireless device, the START value to the most significant bits of the hyperframe number.
- [c8] 8. A wireless device comprising a central processing unit (CPU) in electrical communications with a memory, the memory comprising program code for implementing the method of claim 6.